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LEADING ARTICLES

THE PROSTATE AS A FACTOR IN NERVOUS DISEASE.*

JOSEPH L. BOEHM, M. D.

ST. LOUIS.

Professor of Genito-Urinary Diseases, St. Louis College of Physicians and Surgeons.

THE prostate is to man what the uterus is to woman, in the sense that both have a specific function in the genital life of the sexes.

The prostate is a sine-qua-non in man's potency to reproduce. Anatomically the intricate net work of blood vessels and nerves surrounding and supplying the uterus and prostate, bear some points of very close similarity.

A diseased uterus commonly produces some functional or organic lesion of the nervous system. This fact has been recognized since the early days of neurology and gynecology. Not many years back it was common practice to make a snap diagnosis of hysteria in many neurotic females, without any endeavor being made to locate the exact seat of the trouble, whether intra or extra pelvic.

Today, however, neuroses in the female are treated scientifically by establishing the absence or presence of uterine or pelvic disease.

*Read at meeting of Tri-State Medical Society, Ottumwa, Iowa, September 9, 1908.

By analogy in considering neurosis of the male sex I believe that very commonly the male pelvis is not thought of, and it is not a common practice to establish the presence or absence of an intrapelvic lesion. The principle of determining if male pus tubes, pelvic adhesions or organic lesions of the prostate or rectum exist should be established.

In considering the male pelvis we can readily conclude that the prostate is the organ of paramount importance and when diseased has a prolific influence on the nervous system because of its complex and intimate relationship with both the sympathetic and spinal systems.

Byron Robinson has made a careful and extensive investigation on the anatomy of the pelvis. He describes a constant structure, the pelvic brain, formed by the union of the visceral branches of the sacral plexus with the hypogastric. He says: "The function of this pelvic brain is to rule the physiology of the tractus genitalis, urinarius and intestinalis. The pelvic brain is a nervous center, i.e., it receives, reorganizes and limits nerve force."

In order to fully appreciate the relation and influence of the prostate on the nervous system, we must study its anatomy. As a rule very little attention is given to the prostate in the dissecting room; the average student is fortunate if he acquires a superficial knowledge of its anatomy and hears an occasional reference to this gland.

Hodgson of London, in 1856, described the gland as follows: "The muscle structure from the mucous membrane of the urethra to the capsule of the prostate may be considered as a general muscle coat of the urethra interspersed with glandular tissue." Home in 1806 announced a third lobe, which we consider as pathological. Reginald Harrison (Lancet, 1886) asserted that the prostate is largely a muscular organ, whose chief function is support of the bladder. He explains incontinence of urine as being caused by a lack of development of this gland.

George Walker (Johns Hopkins Hospital Bulletin, 1900, Vol. 2) after thoroughly investigating prostatic anatomy by dissections on mammalians, arrives at conclusions at variance with previous investigators. He finds that the prostatic muscle exists as a definitely distinct muscle from the bladder. The whole muscular structure is arranged primarily to compress the prostate and not to act as a vesical sphincter, as had been

supposed by Harrison. He further claims that the prostate belongs to the generative and not to the urinary organs as its epithelium is an outgrowth of the Wolffina ducts, as are the testes, vas deferens and seminal vesicles. Also the prostatic muscle is derived from the muscular coat of the urethra and adenoid tissue is scattered at irregular intervals throughout the gland. The glandular substance forms about five-sixths of the organ. Fuerbringer agrees with Walker that the prostate is as important as the spermatazoids, for the fluid which it furnishes as a vehicle for the semen allows their motility, and a diseased prostate may cause sterility because an abnormal prostatic secretion may alter the vibratile movements of the spermatazoids.

Freyer of London (Surgical Diseases of Urinary Organs, 1908) says: 'The prostate is in reality composed of twin organs of apparently a purely sexual function, which in some of the lower animals remain distinct and separate throughout life, as they exist in the human male during the first four months of foetal existence."

The physiology of the prostate is all important; judging from the very little attention paid this subject in text-books on urology and physiology, one would imagine that this gland is of no more importance than a small lymphatic node. To the experienced urologist, however, its physiology is a subject of serious attention and study. A very able presentation of research in this line is reported by Heinrich Stern (American Journal Medical Science, 1903, Vol. 126) from which the following is summarized: "The normal juice of the prostate gland even when procured under the utmost precaution is never entirely free from substances secreted by the adjacent glands. A specific ferment causing coagulation of the contents of the glandulae seminalis was described by Cammus and Gley.

"This coagulation is not produced by rennet, fibrin ferment or blood serum. The secretion of the prostate does not alter either blood or milk when mixed therewith."

Lecithin produces the milky appearance of prostatic fluid. I believe that prostatic lecithin is not a waste product; is it not possible that there may be some internal secretions of this gland essentially beneficial in body metabolism?

Kraus maintains that spermatozoa cannot preserve their vitality in the uterine mucosa in the absence of prostatic secretion, but that in its presence they retain their physiological potency often longer than thirty six hours.

We therefore realize that the physiology of the prostate is not as thoroughly and accurately understood as its anatomy. The inflamed prostate produces numerous reflex neuroses. The multitude of symptoms due to these reflexes occur not only through the motor and sensory tracts, but also through the vasomotor system. Cerebral hyperemia, hyperesthesia of the eyes, coccodynia, coldness and numbness of the lower extremities, are directly dependent on the vasomotor influence. Reflex pains along the obturator, ilio-inguinal and ilio-hypogastric and hemorrhoidal nerves are also some of the reflex conditions.

We will now consider some of the diseases of this gland and trace the effect and influence of morbid conditions on the nervous system.

SYPHILIS OF THE PROSTATE.

Syphilis of the prostate is well worthy of close observation. It is surprising how scant the literature is on this subject. From personal observation I can say that syphilitic prostatitis is a distinct entity. Syphilitic involvement of the prostate does not necessarily in all cases mean a previous venereal or inflammatory infection of the gland. In some of the observations, it was difficult for me to say whether the systemic syphilitic infection or the involved prostate caused many of the neurotic symptoms in some of these cases. In two cases there was excruciating pain in the lumbar region, the patients gladly remaining in bed. In all these syphilitic cases, the periprostatic tissues were so edematous that the seminal vesicles could not be outlined by palpation. It is well to remember in this condition that in prescribing the iodides, that free iodine is liberated in the urine and in addition to the inflamed prostatic mucosa of the urethra is added the irritating influences of an iodized urine.

In referring to the inflammatory conditions we will consider that the subacute and chronic inflammatory conditions are of more importance in causing reflex neuroses than the acute conditions.

Some authorities claim the seat of sexual sensibility is the vera montanum, on the floor of the prostatic urethra. It has been my practice to examine with the urethroscope all cases of sexual perverts, masturbators and old roues, and almost always in these individuals have I found a hypertrophied vera monatum, bleeding very readily on the touch of a cotton applicator through the urethroscope.

More generally, however, we find the seat of sexual sensibility described as belonging to the prostate without any particular part being designated. I agree with Lydston,

that "the sexual function of the prostate is rather complex, comprising several elements, viz., a special sensory, secretory and mechanical."

Chronic diffuse prostatitis, interstitial and follicular, is a very common condition, commonly occurring as a sequel from a simple or a gonorrheal posterior urethritis that is uncured. Chronic prostatitis may result from the acute or it may originate as a primary disease. Protatorrhea is a very common symptom with a frequent tickling, creeping sensation of the urethra, frequency of urination, hypersensitiveness on passing a urethral instrument into the deep urethra, and occasional ardor urinae. Undefined pains in the thighs and sacrum, premature seminal ejaculation in coitus, excessive nocturnal emissions, painful or prolonged erections bordering on satyriasis, when sexually excited, or even caused by periphreal irritation of the penis by the clothing; these are some of the very common symptoms.

Kreissl (Urogenital Therapeutics, 1908) says: "The long train of local and reflex disturbances and the functional derangements terminating in sexual neurasthenia require our full attention." He refers to those cases resulting from sexual excesses, etc., as the "aspetic type" of prostatitis. Numerous cases of prostatic neuroses, following chronic prostatitis occur in which there has never been a history of any preceding venereal disease.

Kraft-Ebing says: "The frequency of general neuroses and psychoses arising in sexual functional or organic disturbances is easy to understand. Hyperesthesia, indicative of a cerebral neurosis may be superinduced by prostatic disease, producing increased sexual desire or satyriasis." This is intense and at times there may be maniacal sexual excitation.

In acute and subacute deep urethritis, we commonly find a patient complaining of increased and prolonged sexual excitability. This prolonged and continued congestion of the prostatic urethra is a vital factor in considering the etiology of chronic prostatitis.

White says: "Chronic prostatitis is a more frequent occurrence than the acute form of the disease, but is less understood. A prostate gland the subject of chronic inflammation may be found larger or even smaller than normal size."

Belfield says: "No author that I have consulted, notes the fact that chronic inflammation affecting the prostate is commonly not limited to that organ, but invades a part or the whole of the genital tube proper, and naturally invades the connective tissue enclosing the tube."

Fuller says: "To differentiate a sharp border line between a chronic prostatic and a chronic seminal vesiculitis is not as simple as it may appear. A characteristic symptom is the profound mental depression exhibited by the patient."

According to Chetwood, "chronic prostatitis is liable to be attended by various reflex phenomena, physical disturbances, sexual debility and neurasthenia."

RELATION OF THE PROSTATE TO THE SPINAL CORD.

What is the relation of the prostate to the spinal cord? It has a direct relation and influence as follows: The center of erection and ejaculation is in the lumbar region of the cord and the cerebral genital center, which is largely inhibitory, presides over the prostate, genitally speaking.

Some of the nerve fibres passing between the spinal cord and the genital center of cerebrum transmit exciting and other inhibitory influences. The prostate has erectile as well as muscular and glandular tissue and participates in the venous as well as the arterial engorgement in sexual excitement. A tendency to frequent or constant erection and impending orgasm, as is found in many of the degrees of prostatitis, has a devitalizing influence on the spinal cord. Ultzman and Winternitz both recognized this influence on the cord, the one experimented with electrotherapeutics and the other with hydrotherapy in spinal derangements following this prostatic condition.

Friend (Jour Amer. Asso., 1904) describes a prostatic crisis as a symptom of incipient tabes dorsalis. He claims pain is particularly localized in the perineum in periodic attacks of three to five minutes. Asthenia of the spinal cord, in its different parts, occurs secondarily to prostatic disease.

Asthenia of the dorsal cord is indicated by pain in the occipital region, the nape of the neck and shoulders. Pain in the lumbar region and over the kidneys, is due to lumbar asthenia. Cerebral exhaustion through the influence of the genital center, is indicated by asthenopia. Pain in the cervical and occipital regions when complaind of seldom leads the physician to think of prostatic disease as the primary cause. The following case illustrates this condition: Mr. L., age 27, traveling salesman, contemplated matrimony, was much worried with paroxysmal pains in the cervical and occipital regions; a heavy dull feeling in the nape of the neck and a sensation of weight in the center of the perineum. Patient stated that he thought there was some relation between

these pains, being very observant and intelligent.

Urethra was examined with the urethroscope and the prostate palpated per rectum, showed a marked congestion of the prostatic urethra, a hypersensitiveness of the prostate, which was firm, hard and somewhat large. No gonorrhoeal history, but a frank confession of prolonged sexual excitation with only temperate amount of intercourse. A three-months treament of local applications to the urethra, rectal treatment of the prostate, completely relieved his pains in neck and occiput and he discontinued wearing his glasses that had been prescribed by an oculist for his so-called weak eyes.

NEURALGIA OF THE PROSTATE.

Neuralgia of the prostate is very often caused by a non-venereal inflammatory hyperesthesia of the prostatic urethra. Keyes makes a distinction between the two classes of cases, one a pure neuroses, the other cases of sexual excess in the young.

This is one of the most distressing and harrassing of all prostatic diseases to the patient and our efforts at rapid and effective treatment is often very slowly responded to, much to the chagrin and disgust of our patients. It may be reflex to some disease of the testes or epididymi, and vica versa neuralgia of the testes and spermatic cord may be merely a reflex condition due to a chronic inflammation of the prostate. At present I have a case of this latter class under my observation, which is due to chronic gonorrheal prostatitis, in a dentist, who has suffered so severely in the last three years that he now desires a prostatectomy with the hope of getting his aching testicles relieved.

I have a very interesting case of chronic-prostatitis under observation, with a severe sacral pain reflexly for some months, who suddenly developed a dull pain over his upper pubic region, and symptoms suspicious of renal colic. An X-ray picture shows a small calculus in the lower end of the right ureter. In this case undoubtedly his prostatic disease long preceded the stone in the ureter.

Very commonly we hear of sciatica, sacro-iliac disease and disease of the psoas muscles, being diagnosed because of some vague pain as a symptom in the upper or middle of thigh, when a thorough and well directed examination of the prostate, and the proper treatment may bring a speedy relief to the patient.

A patient, 22 years of age, left the insane asylum one year ago, where he was incarcerated for acute mania. He admits excessive masturbation for months, and presents all the appearances of dementia, while he is very rational at times. He said he often told the physicians of pains in his sacrum and hips, and he was dismissed without any attention for same. I examined his prostate and found same as large as a good size lemon and abnormally sensitive. Urethra extremely hypersensitive. Prostatic treatments have made a different individual of him, and done much to quiet a very neurotic patient.

Prostatic gout is a term coined by Harrison and is not generally referred to as a distinct entity. In this condition we have a typical picture of systemic gout with the corresponding involvement of the urinary tract, and the prostate involved merely as a coincident.

SEXUAL NEURASTHENIA.

Sexual neurasthenia is a vague, misunderstood term, well worthy of consideration and is so commonly used to cover much professional ignorance and omission. It is a secondary condition only too common as a sequel of a diseased prostate as a primary factor. Abrams in a recent monograph, says: "Nervousness while expressive of an enfeebled nervous system is an expression evoked by some irritant, resident somewhere in the system, otherwise than the nervous system." If this definition be correct then we may assert that sexual neurasthenia is dependent on some irritant in the genito-urinary tract, not in the nervous apparatus.

This irritant is only too commonly a chronically diseased prostate. Beard, a pioneer neurologst, claims, "next to the stomach the prostatic urethra is the most important center of reflex irritation in the body. There is every reason physiologically and anatomically why this should be so and a close study of the symptoms of nervous debility proves it to be so. A morbid state of the prostate is both an effect and a cause of nervous exhaustion; for it is impossible to have an irritable prostate and yet be in good health in other respects."

Sexual neurasthenia is an impoverishment of nerve force and without doubt it is proven that prostatic disease produces it. In this condition we may find a prolonged phosphaturia and oxaluria, which does not as a rule respond to a change in dietary or mineral acids.

Therefore in a neurosis, where there exists a continued phosphaturia or oxaluria, and a condition of irritation in the genital tract, after eliminating the possibility of calculus, we must remember the prostate as being the factor to receive attention.

Psychoses from chronic disease of the

male genital organs is only too frequent. Lydston says, "Care must be taken to carefully discriminate between cases that are psychoses abinitio and those in which the psychic element is simply an ingraft upon the symptoms produced by the organic disturbances."

The following illustrates a case of psychosis from prostatic disease in which there was no evidence of organic nervous trouble.

Mr. X., age 35 years, merchant; married for two years. He suddenly became worried over his inability to perfectly fulfil his marital relations. He complained of physical weakness and inability to concentrate his mind on business matters for any length of time, with occasional cardiac pains and palpitation, black spots before his eyes, occasional vertigo while walking on the street. While at work at his desk at intervals of two months he had attacks of syncope. His case was diagnosed by an ophthalmologist, who used the ophthalmoscope, as anemia of the brain. By an able internist as an incipient myocarditis, who sent him to a sanitarium for several weeks to take a course of mineral baths, etc.

Finding that hydrotherapy failed to relieve his spinal weakness, he consulted another clinician, who told him he had enteroptosis with autointoxication and was advised to wear an abdominal belt and was given intestinal antiseptics. He finally came under my observation, and as I had known this patient very well socially for several years, I knew that his prematrimonial habits were those of sexual excesses and dissipation. I attributed his spinal asthenia to his past habits and life, and thought the cerebral exhaustion, enteric and cardiac symptoms were merely secondary conditions. The patient agreed that his past sexual career had some bearing on his present condition, causing his apparent impotence, etc. Urethroscopic examination of his prostatic urethra showed an edematous vermontanum, and merely swabbing his urethra with a cotton applicator set up a hemorrhage showing a high degree of congestion. Prostate was extremely hypersensitive, so that on rectal palpation patient fainted in the office. Prostate was soft and large, causing, as I believed to a great degree his constipation.

Local applications and treatment made rapid improvement so that the patient's confidence in the diagnosis was obtained. Chronic prostatitis existed in this case, with an absolute denial of any previous gonorrhea. According to his statement, he consulted six different clinicians and not once was any hint made of any possible prostatic involvement. He has been constantly under observation for the past three years, and he has successfully impregnated his wife and is now living a happy and comfortable life.

THE MEDICAL ASPECT OF RAPE AND CRIMINAL ASSAULT.

Almost daily we read in our press of cases of rape and criminal assault. The recent riots in some of our municipalities had their initiative because of an assault on a white woman by some colored fiend. It has been interesting to me to ascribe some cause for these frequent cases both in the North and in the South, due, as I believe, to condition of sexual mania. In a recent number of Collier's Weekly, it is stated as follows: "Is it plain now the secret of many and many a lynching in the South? The primitive negro field hand, a web of strong, sudden impulses, good and bad comes into town on a Saturday afternoon and pays fifty cents for a pint of gin. He absorbs not only its toxic heat, but absorbs also the suggestion, subtly conveyed (due to some obscene label) that it contains aphrodisiacs. He sits in the road or in the alley a the height of his debauch, looking at the picture of an obscene white woman on the label, drinking in the invitation which it carries. And hence comes—opportunity. There follows the hideous episode of the rope or the stake."

We find in this dramatic recital an inference that most cases of rape committed by the negro are due to liquor, i.e., alcohol and aphrodisiacs. I have taken the pains to inquire from the St. Louis manufacturer of this brand of gin, whom Colliers attack and obtained the statement that they do not use any aphrodisiac drugs in same, but merely flavor it with some aromatics. I therefore suggest this periodical prove the correctness of its logic that sexual mania, causing its victim to rape, is due to alcohol. I will proceed to show it is due to uncured venereal diseases more than to alcohol.

From records of my clinics, I can absolutely prove that very few of the average negroes allow themselves to get cured of gonorrhea; seldom if ever returning when the urethral discharge diminishes and as is so common when a posterior infection sets in, the urethral discharge temporarily ceases, they have often said they are well. Therefore they go on indefinitely with a posterior gonorrhea, and as we presume only too frequently the prostate gland becomes involved. Many of these kind of patients have told me in the clinic that they have had some kind of a urethral discharge for years. In a recent magazine article, entitled "The Future of the Southern Negro," the writer, a physician, stated that the large percentage

of chronic venereal diseases amongst them is appalling. It is almost second nature for the roustabout or plantation hand to have his so-called "running-rings," the vulgar name for a urethral discharge. In his hip pocket only too commonly does he carry his bottle of Harlem oil, or a mixture of copaiba and nitre, which is his prophylactic and specific he prescribes for himself.

Such a negro, low in the scale of intellectual development with a diseased prostate and prostatic urethra, is in a condition of constant erotic excitation. At times he is so excited that he borders on a state of orgasm, like a vulture seizing its prey on the field, he assaults some innocent woman he passes on the highways.

There is a popular fallacy amongst some ingorant persons, that to cure a clap, intercourse should be had with a virgin. This also may have some influence on his ignorant superstitious mind. How many white men of intelligence boast of their morning drop, urethral tears of years standng?

May I assert without fear of contradiction that some forms of sexual perversion may a priori be due not to a pyschosis, but to an originally diseased prostatic urethra, effecting the nervous system. Irritable prostate is frequently referred to. It is merely a symptom of some organic prostatic disease, possibly an old gonorrhoeal condition, causing all varieties of reflex neuroses. We have shown the relation of the prostate to the sympathetic nervous system. Therefore it is proper to believe that erotic delirium is superinduced by some chronic inflammation of the prostate or exudate in its sheath.

"Do something for me, or I will attack a woman on the streets," is the statement I have heard from these sufferers who have often been men of culture and standing. The poor negro, however, does not realize that his excitation is due to some previous venereal infection. In 1899 at the St. Louis City Hospital, I made a careful study of the prostates of negroes and found a large number of diseased conditions, where the patients never placed any relation to some previous urethral infection. Tuberculous involvement of prostate and epididymi was very common.

In a medico-legal contest on a criminal pervert is it not logical to examine his genital organs and the condition intrapelvically, in ascertaining his mental and civil responsibility? Is not chronic disease of the prostate as much of a specific condition as thickening and inflammation of the covering membranes of the cerebrum for which many a criminal is sent to an asylum.

MEDICO-LEGAL STATUS OF CRIMINAL PERVERSION.

Psychiatry should take cognizance of the possibilities of this condition; a staff of consulting neurologists may examine a criminal as to his mens sans, does a staff of urologists often examine the genital organs of the accused by order of court?

A man who commits rape is probably as insane as one who has a "brain-storm" or "Dementia Americana," and is entitled to as careful examination of his gentalia as these individuals are to the defense by noted alienists who are paid princely sums for their diagnosis of fabricated mental diseases, to which some have so credulously and willingly testified.

Recently in St. Louis, a pervert known as "Jack the Stabber" was convicted on the testimony of examining neurologists. The testimony does not show that any examination was made of his pelvic genitals to show the presence or absence of any organic sexual disorders; however, more stress is laid as a rule on hereditary taints and predispoition than on the status presens of the criminal. It is my firm conviction that this is only just to the accused to make such an examination of his genito-urinary system.

In summarizing, we conclude the following:

First. The prostate and its appendages when diseased has a special influence on the nervous system, in close similarity to the nervous sequelae of the diseased female pelvis.

Second. The prostate and seminal vesicle are to the neurotic male what the uterus and tubes are to the female and must always be carefully examined in neuroses.

Third. Apparently simple disturbances of the prostate may cause serious reflex neurotic conditions because of the complexity of the nervous mechanism surrounding and supplying it.

Fourth. The question of an internal physiological secretion and the possibility of the lecithin and organic constituents of prostatic secretion serving as a nutritive factor to nerve metabolism, has not as yet been scientifically determined.

Fifth. Spinal asthenia and cerebral exhuastion are very commonly and often ascribed to over-work at the office or in literary pursuits, but not always recognized as dependeut on a diseased prostate.

Sixth. In cases of sexual crimes and criminal perversion, an intra and extra pelvic examination of the genitalia of the accused should be made by expert urologists at the

same time that the expert neurologists examine the mentality of the accused.

Seventh. Jurists should recognize the mental condition of the fiend or pervert, who commits sexual crimes as not always due to a hereditary taint, but probably as commonly, the result of some previous urethral disease, uncured at the time. From this chronic diseased condition sexual mania results.

Eighth. There is a medical aspect to the recent lynchings and riots because the fiends responsible for same are diseased and are not human monstrosities. Temporary sexual insanity is a reality as much as a deranged mentality caused by typhoid fever or some condition of hyperpyrexia.

715 North Eighth Street.

THE THERAPEUTIC TREATMENT OF TYPHOID FEVER FROM BEGINNING TO THE END.*

C. F. WAHRER, M. D.

FT. MADISON, IA.

President Iowa State Medical Society.

I KNOW of few medical subjects on which more has been said in medical literature than typhoid fever, especially its treatment. Until the discovery of Eberth's bacillus we had no full conception of the pathology of typhoid fever, except that it was an enteric disease, and that its principal points of attack was found in Peyer's patches, the aquiminated and solitary glands of the intestinal canal. What I will say must necessarily be only a resume of the main things we now believe we know, and I must make that as simple as possible, to guide perhaps a few who are still lost over the rocks and shoals of this dangerous and protean disease.

First, let us remember there can be no one treatment for all cases, for typhoid fever differs in different people, according to conditions of life, age, sex, constitution, hygienic surroundings and peculiar inherent characteristics to battle with disease. Some cases are mild and simple, others are severe and complicated, and in the latter we must not only treat the disease per se, but each of the many, and often dangerous complications. These are very numerous and may consist of grave nervous disturbances as meningitis, myalgia, pneumonia, bronchitis, nephritis, adenitis, often a dangerous perotiditis, ulceration of the bowels, with severe and repeated hemorrhage, perforation, peritonitis, splenitis, hepatitis, constipation with tympanitis and meteteorism, cystitis, diarrhea of an exhausting character, hemorrhoids, arteritis, phlebitis, bed sores conjunctitis and other eye troubles, edema of the glottis, neuritis, endocarditis, gangrene, heart lesions, mastitis, jaundice, abscesses, various neuroses, phlegmons, trismus, pyuria, and finally during convalescence one may have typhoid spine. This is only an approximate list of the complications, I couldn't think of all of them.

So you see at once I can not give the treatment for all cases of typhoid fever, because it would include the complications, and that would occupy more time than this session has at its disposal.

Again, in the treatment of even the ordinary types of typhoid we must consider the personal side of the patient. Fleshy, though apparently healthy people do not bear the disease as well as the tough, raw-boned kind. Women stand a smaller chance than men. Extremes of age do not do as well as the younger adults. In children from three to twelve it is usually a mild affection; above 45 nearly always grave, that increases in danger with advancing age. Between 15 and 35 we have most cases and the older a person is, over 35 to 45, the rarer the disease becomes.

The treatment must be medical, hygienic and supplemented by good nursing. In prebacillary days many were treated by keeping the bowels constipated, large doses of quinine and usually by starvation, and the mortality was usually near 40 per cent Since the knowledge of the bacillus we naturally look toward bactericides as antidotes, and judicious feeding, thus conserving the patient's strength, because we have always an exhausting disease—both to control temperature, and to act as a tonic to the superficial nerves, and use such diet as will be most nourishing, easily digested and at the same time afford the least pabulum for the multiplication of the bacteria. Since the days of Rossbach, and the Frenchman Bochard, who elaborated the subject of autointoxication, we naturally look to intestinal disinfectants to kill the bacilli in situ, thus diminish the cause of the disease, and theoretically that seems correct, but the studies of Mueller, Fuerbringer and Stern taught us, some of us, conclusively, that even before the diagnosis is made, the bacilli though elaborated and having done their mischief in the intestines, have now already wandered into adjacent tissues, into the follicles, the mesenteric glands and the more distant organs, especially the spleen and other glandular structures, thus being out of the way of in-

*Read before the Tri-State Medical Society at Ottumwa, Ia., September 9, 1908.

testinal antiseptics, hence inocuous to the bacilli as they are no more accessible to the antiseptics, therefore such therapeutics must be useless,.

And yet these remedies, I am sure, are of real service, if not directly as was thought then at least indirectly. Not all of the bacilli had become hidden, as above stated, millions were still in the bowels, causing putrefaction, producing gas, tympanitis, and thus stretching an already weak bowel wall, laying it liable to perforation and paralysis. If this is neutralized by the antiseptics and the bowel made flat, we have accomplished much.

Again, in selecting the diet for the patients, such diet as will afford the poorest culture medium for the bacilli. The reason is obvious, even though the practice is a little inconsistent with their theory.

Some of the principal remedies thus used with marked success are calomel, the sulphocarbolates of sodium, calcium, potassium and zinc, of which the sodium salt seem the best, or even better yet, a judicious mixture of all of them, having care not to get too much zinc, or else it will vomit the patient. Salol, bismuth salicylate, mercuric salicylate, a, naphthol, b, naphthol, iodoform, phenol well diluted, eucalyptus, iodine, and the several benzoates and many others too numerous to mention. These alone or at times combined with some laxative, have in judicious hands done splendid work.

The principal treatment is not so much of drugs as it is dietetic and hygienic, yet before I go into that I want to mention a drug treatment that in some hands, according to reports, has yielded excellent results, while in others the results were indifferent. I refer to the use of acetozone, or what another manufacturer calls a similar product, namely, alphozone. Both are peroxides of some form, and like the others are powerful antiseptics which are recommended by their exploiters to be exhibited in frequent doses with large quantities of water.

Water drinking alone is advisable in typhoid fever to promote sewage and to wash out the rapidly oxidized waste materials, supply the waste of water from the fever, and thus these remedies, in addition to what virtues they may possess, aid in drinking water. Some patients, however, refuse them, as they soon tire of the peroxide taste and vomit them up, hence get no benefit from them. The reason diet and good feeding play such a role is because in this disease we have an almost frightfully rapid disintegration of the proteids and a consequent weakening of all the vital processes. We must not only select the diet for the patients carefully, but see to it that they are well fed and nourished. Graves of England, well supported by Murchison, taught us to feed fevers, and for this alone he deserves a monument as high as the Eiffel tower. We must feed early, and if possible prevent the weakness so consequent upon this exhausting disease. This must, as well as all our treatment, be carefully supervised in all of the three stages of the disease—the onset, the culmination of its full energy, and especially and most emphatically and pedantically during the dangerous period of convalescence. Perhaps as many patients die during this stage as any other period of the disease. Usually, too often when the patient has entered upon the convalescent stage, as shown by return to normal temperature, a subsidence of all the usual typhoid symptoms, and the appearance of an appetite many times too large for the size of the patient, both nurse and physician often are too anxious to get free from the bondage of so exacting an attendance as is necessitated by so worrying a disease, and too often they now allow the patient to go it alone according to his inclinations, and lo, we have a relapse, and not seldom a funeral!

The hygienic treatment consists in bathing and sponging when the fever is high, and if persisted in by going over the patient usually with cold water three or four times methodically the temperature will fall to reasonable limits and the patient who was nervous, restless and sleepless before, now becomes quiet and soon is in a refreshing sleep. This can be repeated every time the fever goes up toward 102 deg. F., and will usually be successful.

The cold, almost brutal tub bath is now no more needed, but when given the patient should be vigorously and thoroughly rubbed while in the water and for some time after he is taken out. In some cases sponging with hot water, hot vinegar or hot alcohol, better results at reduction of fever are attained than with cold water. Sponging is safer than antipyretic drugs, such as the coal tars, as sponging is tonic and these drugs are generally depressant.

Where, however, the fever is persistent in a sthenic case with good pulse and red face, acetanilid or phenacetine may be given in small guarded doses, and they seldom do harm in such conditions.

The ice bag or coil to the head or over the bowels, also sometimes ice water enemas are quite useful to reduce fever, without doing any harm.

Rest in a well-appointed room with fresh air and cleanliness are of great importance. Rest should be most emphatically insisted

upon and the bed-pan insisted upon in the first stage. It is reprehensible, even criminal, to allow the patient to go to an outdoor toilet, or even to rise and walk to the closet and void his urine or stools as long as he may be able to do so. In so exhausting a disease as this strength should be miserly saved at the very beginning and so continued through the stage of convalescence.

So now a little resume: When the diagnosis is certain begin with 2 to 5 grains calomel and follow by sulphate magnesia. This will clean out the bowels and act as a diuretic and antiseptic as well. The use of a tonic, as quinine and strychnine may be given in sufficient doses to help maintain the strength. Follow with the combined sulphocarbolates as antiseptics, and thus keep up a cleanout and stay-clean process. After the initial purge the bowels may be kept open with podophyllin, or cascara, or some of its compounds; salines at times are also useful, so is castor oil alone, or where gas is troublesome, combined with turpentine.

Keep temperature controlled with sponging, conserve strength with tonic doses of quinine, strychnine and digitalin; appetite stimulated with bitter tonics, gas controlled with the mixed sulphocarbolates, for instance use the so-called intestinal antiseptics, now made by various pharmaceutical houses in varying proportions of the sulphocarbolates of zinc, calcium and sodium, with additions of bismuth salicylates and menthol, or if preferred, with betanaphthol and bismuth.

Local antiseptics must be rigidly enforced to keep the mouth clean, also lips and teeth after each taking of food. These apparently trifling details may do more to obtain favorable results than the administration of all the drugs put into the stomach. When hygienic measures are all carried out in connection with judicious feeding, we seldom have delirium in the course of the disease.

Now as to the matter of feeding. First, let it be remembered that the whole alimentary canal is affected and all its functions held in abeyance, hence nutrition is greatly impaired in addition to the rapid tissue changes and a very much perverted metabolism. We must, then, not only select such food as is most acceptable to the patient's palate, but that which by experiment brings us best results. It is a continuous problem that is never completely solved until each particular patient is discharged as cured. Generally speaking, milk is probably more used than all other foods together, and it will probably answer as a perfect food better than anything else. It is the ideal food, as it contains in proper proportions the proteids, fats, and carbohydrates and the necessary salts.

In all febrile diseases fats are desirable as foods, and milk contains that in finely divided emulsion. Of course some patients bear milk poorly and cannot take it plain, as is manifest by belching, sour eructations and the formation of large clots in the stomach. Sometimes dilute hydrochloric acid which is usuually deficient in enteric fever, will overcome the inability to take milk, also the addition of mucilaginous foods, as oat meal gruel and tapioca are useful; also boiling the milk is very acceptable to some. Adding lime water or the use of malted milk, peptonized milk or substituting buttermilk, which can be made artificially with lactic acid bacteria preparations, may be used instead of plain milk. If milk is poor in fat, as for instance, buttermilk, cream may be added, or use ice cream at times or junket. Some object to milk because it is a good culture medium, and prefer oat meal preparations instead. Mucilaginous soups are very acceptable to some patients, as they are rich in proteids and fats, hence ideal, only some patients tire of them. We can a'so add rice, sago, wheat and maize preparations. Meat broths come next, but the fats better be skimmed off, as they are not well borne. The various forms of Liebig's extract of meat, Valentine's or Armour's beef juices, and the various beef preparations now on the market are valuable aids in feeding.

Eggs are best not enforced, unless given with milk and brandy or wine, such as cherry or port. The white of egg can be given as albumen water in sherry or lemon juice as a routine drink for thirst, while it nourishes at the same time. Great caution should be exercised in not exhibiting alcoholic stimulants too early, nor ever in too great quantities. Among the well-to-do the better wines may be used, but among the poor, brandy or rum are best. True Jamaica rum is among the best as it mixes easily with milk, tea or coffee and is not disliked by most patients. Hydrotherapy, were it not for its complicated methods and its practical impossibility in country and most private practice, would probably yield the best results of all.

Serum treatment has so far given no results worthy of mention, as it is a very complicated, and at best applicable only in well appointed hospitals with laboratory connections. The investigations of Chautruesse, Widal, von Jaksch, Klemperer, Hammerschlag, Levy, Peiper, Beumer and Stern, while valuable as laboratory investiga-

tions, may utilmately lead to something, but as yet few patients have been treated with any but very indifferent results.

In general I desire to say, the treatment of typhoid fever can never become dogmatic, because ofthe many complications and other factors, hence it must be studied in each individual case, the exercise of good judgment, and it is rather a matter of growth in experience, rather than a rule of thumb that can be communicated from one man to another. A good physician guides, rather than treats, a case of typhoid fever. Like a good pilot who keeps his ship off the rocks and shoals, by steering properly according to a knowledge of the bottom of the water he is navigating. He doesn't make the boat go, or reef sails, or shovel coal, he only steers. You can't treat one patient like you treated another one, or you will fail. Take for instance the matter of bathing. All forms of bathing must be stopped at once when you have hemorrhage of the bowels, or even any signs thereof, also in peritonitis, or where we have a weak heart, or marked arteriosclerosis, an uncompensated valvular lesion, or pleuritic effusion, or phlebitis, or when the patient is near or above 60 years old, or the very obese.

I give this as a mere hint, not that it covers the whole ground by any means. Then since it is inexpedient to cover the whole range of treatment I will stop here, trusting this paper will incite some one to get to work and dig. The man who is self-satisfied and complacently follows a routine treatment, as for instance, the exploded Woodbridge method, will be doomed to disappointment and many failures, and his mortality will be correspondingly high. Your high calling as a physician demands of you to do your best, which in typhoid fever is never any too good.

1007 Fifth Street.

KEOKUK MEDICAL COLLEGE CLOSED.—On October 23, 1908, the Keokuk, Iowa, Medical College, the oldest medical college west of the Mississippi River, closed its doors. This institution was founded over sixty years ago, and was the first medical college anywhere in the world to admit women on the same terms with men. It is reported that the college equipment has been sold to Drake University, in Des Moines, and arrangements have been made by that college to receive the students who had registered at the Keokuk College. Much regret is expressed by the residents of Keokuk at the passing of one of the landmarks of their city.

THE MEDICAL FORTNIGHTLY

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Edited By
DR. THOS. A. HOPKINS

And the Following Associates:
JOHN McH. DEAN, M. D., Surgery.
ROBT. H. DAVIS, M. D., Dermatology.
W. E. FISCHER, M. D., Ophthalmology.
R. B. H. GRADWOHL, M. D., Pathology.
A. F. KOETTER, M. D., Oto-Laryngology.
O. E. LADEMANN, M. D., Internal Medicine.
W. H. VOGT, M. D., Gynecology.
O. H. BROWN, M. D., Tuberculosis.

Editorial Rooms, Suite 319-321 Century Building, St Louis.

EDITORIAL

The New Board of Health for Missouri.

THE election of a Republican Governor in Missouri has lead to no little speculation as to the aides with which he will surround himself. The opinion that Governor Hadley has earned is that his appointments will be largely a result of individual worth and ability to serve the state. The new State Board of Health is a matter of interest to every individual in the State, but it especially concerns the medical profession; this body, above all others, should be composed of men chosen for integrity and ability rather than as a reward for political service. The State Board of Health has concerns which are vital to the State; we hear little of our board exercising itself in matters other than the regulation of medical schools and the examination of prospective practitioners, matters which are a small item in the duties and responsibilities of such a body. Medical editors are very familiar with the lack of aggressiveness of the Missouri Board, along several lines, as compared with neighboring states. We do not remember that we have ever received a communication of any character from the Missouri Board, but rarely a month passes that does not bring us varied literature from Illinois; vaccination, quarantine, water supply and other equally important matters receive attention such as they deserve in neighboring states, and bulletins of information are generously distributed and publicity encouraged. Possibly Missouri laws may limit the activities of our Board, either by failing to give authority, or by failing to furnish the money to enable such activities. And again, possibly the Board is doing much of this work, but doing it so quietly that we know nothing of it.

Modesty is a fine thing in an individual, but not in a State Board of Health.

We have several hopes for the new Board: we hope that the Governor will eliminate political reward and stick to ability to serve in making his appointments (or possibly unite the two); we hope that he will seek material outside the faculties of medical schools—there is an abundance; we hope that he will investigate the professional standing of prospective candidates, he might do worse than to get an expression from the medical society of the community in which each individual aspirant lives. Such a board can do much for Missouri, it will do much for Missouri. What Governor Hadley will do remains to be seen, but we are expecting nothing but good.

Climate and Tuberculosis.

In spite of the demonstration, often repeated, that tuberculosis can be effectively treated in this climate, we must confess that were the person afflicted ourself we would diligently urge him to hasten to a climate where conditions are more favorable to a cure than those found in this section. We do not think that we would go to Texas, for Texas has other aims than to become the Nation's sanitarium, and it is bad enough to be an invalid without locating one's self where he is liable to be made to feel that he is distinctly not wanted. It is pleasing to find that there are favorable localities where the patient is not regarded as an undesirable citizen. We gather from the Colorado Souvenir Book recently issued by the Colorado branch of the International Congress on Tuberculosis,* that Colorado is ready to welcome patients of this class, to whom she can offer a reasonable certainty of benefit. It goes without saying, that a person without available means of sufficient proportions cannot expect benefit from a climate when he has not the wherewith to eat nourishing food and to lodge in suitable quarters; it also goes without saying that it is worse than useless to send a person who is certain to be so homesick that it will be the one dominating thought to any climate that is not the climate which surrounds home and loved ones; homesickness can down any treatment and any surroundings which lack the constituent features of home; and too many patients make the journey when hope is already gone and when no climate can benefit them, the change simply hastening the end.

*Exhibition Committee, Colorado State Organization, 823 Fourteenth street, Denver. Price 25 cents.

But Colorado believes in the health-giving properties of her clear atmosphere, and she is not denying them to those who can be benefited thereby. She offers a climate that is unquestionably better than that of Missouri and Illinois. The home treatment is a great thing, and it should be developed and encouraged, every possible aid should be called in which can assist a return of health. It is for us to judge conditions, and it is impractical and even cruel to prescribe impossibles, but where the impossible does not enter into the consideration let the added advantage of climate be placed at the patient's command.

The Spread of Prohibition.

Prohibition is a word which does not strike the ear of a liberty-loving person pleasantly, and it is only when it is associated with the idea of protection that it is in a degree less objectionable. No physician needs argument to convince him that restriction and prohibition is necessary in our crusade for the prevention of disease, but it is somewhat surprising to find that some whose activity approaches the extreme, in matters of sanitation, quarantine and the committing of such dangerous practices as spitting in public places, are very loth to consider the question of alcoholic drinks in their relation, direct and indirect, to disease. Many oppose efforts tending to stricter control of alcoholic drinkables on the sole ground that it is an invasion of individual liberty. It is significant that the peoples of many states have risen in the matter; Missouri is "dry" in seventy odd of her counties; since the 3d of September last no less than thirty-eight counties in Ohio have eliminated the sale of liquor and beer, and other counties are to vote the question shortly. In several other states a like movement is in progress. Whatever the attitude of the medical profession may be it is unquestionable that a majority of the public in many sections believes that the use of alcoholics is not alone objectionable to a civilization as enlightened as ours, but they beileve it is very often an indirect menace to health, and almost as frequently a direct menace. Dr. H. S. Williams has contributed to McClure's Magazine an article on the "Hereditary Effect of Alcohol;" we have had no opportunity to verify the statistical information in this article, but it is naturally supposable that the statistics are dependable and capable of verification; if they are true it is high time that the medical profession interests itself in the present movement, for such articles are moulding

public sentiment and establishing it in a new appreciation of things which have been observed in every-day life. No arguments brought forward by the pro-saloon element can efface such argument as Dr. Williams presents. The following from this magazine is going the rounds of the daily press.

"In examining into the history of 2554 idiotic, epileptic, hysterical, or weak-minded children in the institution at Bicetre, France, Bourenville found that over 41 per cent had alcoholic parents. In more than 9 per cent of the cases he ascertained that one or both parents were under the influence of alcohol at the time of procreation. Of similar import are the observations of Bezzola and of Hartmann that a large proportion of the idiots and the criminals in Switzerland were conceived during the season of the year when the customs of the country—"Mayfests," etc.—lead to the disproportionate consumption of alcohol. Experimental evidence of very striking character is furnished by the reprodutive histories of Prof. Hodge's alcoholized dogs. Of 23 whelps born in four litters to a pair of tipplers, nine were born dead, eight were deformed, and only four were viable and seemingly normal. Meantime, a pair of normal kennel companions produced 45 whelps, of which 41 were viable and normal—a percentage of 90.2 against 17.4 per cent of viable alcoholics. Prof. Hodge points out that these results are strikingly similar to the observations of Demme on the progeny of 10 alcoholic as compared with 10 normal families of human beings. Then 10 alcoholic families produced 57 children, of whom 10 were deformed, 6 idiots, 6 choreic or epileptic, 25 non-viable, and only 10, or 17 per cent of the whole were normal. The 10 normal families produced 61 children, 2 of whom were deformed, two pronounced "backward," though not suffering from disease and 3 non-viable, leaving 54, or 88.5 per cent normal."

Is this true or is it false? If it is true, and we have no reason to doubt its truth, the medical profession is open to question as to its consistency, for it is representing to the public that its prime motive is the prevention rather than the remedying of disease.

Cocaine Peddler Arrested.—Startling statements have been made recently regarding the use of cocaine among some of the boys in the high schools of Philadelphia, and one man was arrested on October 29, charged with peddling the drug. The prisoner was held in $2,000 bail, and because of the threats of the irate mothers of the victims, seemed glad to go to jail.

ST. LOUIS ITEMS.

Surgeon-General Walter Wyman spent a few days in the city early in the month.

Dr. E. Lee Dorsett has been appointed assistant gynecologist to the Deasconess Hospital, St. Louis.

Dr. William E. Leighton has been appointed assistant surgeon of the St. Louis Skin and Cancer Hospital.

Dr. Nathaniel M. Semple has been appointed editor of the Bulletin of the St. Louis Medical Society, vice Dr. Edmund A. Babler, resigned.

The St. Louis Medical Society is feeling the first thrills of its coming election; candidates for each office to be filled are being presented by those interested and an active campaign seems probable.

Dr. A. E. Horwitz lately returned from an extended period of study abroad, where he has been devoting especial attention to orthopedic surgery. He has established himself in offices in the Metropolitan Building.

The introduction of the vacuum process of cleaning as a substitute for sweeping is one of the more sanitary of recent inventions, and one which should be adopted as soon as may be in every household. A vacuum system is to be installed in our city hospital at once, and it is hoped that the other city institutions may be similarly favored at an early date.

St. Louis has two or three physician-druggists who are almost constantly in trouble with the police over the sale of cocaine. It seems a deplorable thing that any physician would even allow it to be suspected that he would lend his assistance to the further degradation of those unfortunates—the cocaine and morphine habitues. It is to be hoped that the fact may be speedily established, if fact it is, and the culprits put out of business.

Plague in the Azores.—An outbreak of buonic plague has been reported in Terceira, one of the Azores.

Objection to having physicians employed by the city of Indianapolis to examine the students in the private schools was made October 27 to the Indianapolis Board of Health, and as a result such schools may employ their own medical examiners.

THE REVIEWER'S TABLE

Books, Reprints, and Instruments for this department, should be sent to the Managing Editor, Century Building, St. Louis.

A MANUAL OF CLINICAL DIAGNOSIS. By James Campbell Todd, M. D., Associate Professor of Pathology, Denver and Gross College of Medicine, Denver. 18mo. of 319 pages, with 131 text-illustrations and 10 colored plates. Philadelphia and London: W. B. Saunders Company, 1908. (Flexible leather, $2.00 net.)

This very useful volume is gotten up in the style of Hughes' Compend of Medicine and Binnie's Surgery and in the excellence of its text it may well be regarded as a companion volume. The whole subject is ably handled and in a concise, clear manner that makes meanings clear and readily applicable; the chapters on urinalysis and blood examination are exceptional in their completeness, and with thorough elimination of all that is not of definitely practical value. Whether the physician has at his command the modern laboratory facilities of the larger cities, or has to do his own laboratory work in the improvised laboratory in his office this volume will prove a reliable guide to definite and accurate results, and that without the confusion which is so frequently met in undertaking work of this character.

GONORRHEA IN WOMEN. By Palmer Findley, M. D., Professor of Gynecology in the College of Medicine of the University of Nebraska, Omaha, etc. St. Lotis: C. V. Mosby Medical Book and Publishing Co. 1908

The author presents the subject of gonorrhea in this book of about 100 page in a concise yet quite thorough manner. The introductory chapter dealing with the history of gonorrhea is interesting and well written. The subject is considered from a sociological point of view quite extensively, possibly a little more so than would be necessary for a book of this character, yet it makes interesting and instructive reading. The treatment is fairly complete; it gives instruction in a clear manner what to do for gonorrhoea in its various stages, and is all the general practitioner could be expected to carry out. All in all the book will be a time saver for the busy practitioner who has not the time to read through many volumes of text-books, for in this little volume he can get a great deal of information condensed in the very simplest form. For those who care to make a more careful study of the subject the author has appended a large bibliography. The publishers, the C. V. Mosby Co. of St. Louis, who are still a young firm, are to be congratulated on the excellent book-making, and the same should be encouragement for more good work. V.

THE PRINCIPLES AND PRACTICE OF GYNECOLOGY. For Students and Practitioners. By E. C. Dudley A. M., M.D., Professor of Gynecology, Northwestern University Medical School etc. Fifth edition, revised and enlarged. with 431 illustrations and 20 full-page plates in color and monochrome. Philadelphia and New York: Lea & Febinger, 1908.

With the fifth edition of Dudley's Gynecology we again have the same pleasure that we had in perusing the previous volumes. This edition, however, has been considerably enlarged and much new material added—an introductory chapter and one on "Incontinence of Urine" have been added.

In his introductory remarks the author says that the widening of limitations to include the territory of abdominal surgery has given rise to an extraordinary and altogether interesting effort on the part of the general surgeon to promulgate the erroneous idea that the gynecologist has become a general surgeon, and thereby has forced gynecology as a specialty to the background. Thus we hear of the "Passing of a Great Specialty." Gynecology, he says, has not passed. We are specialists in diseases of women; we are to a rapidly increasing extent specialists in abdominal urgery, a field in which the general surgeon is indebted to us for a great part of its practical and scientific progress.

Dudley's book is mainly operative, and the operations are all clearly described and beautifully illustrated, the illustrations showing the operation in most cases step for step. Aside from the operative features of the book the non-surgical treatment of pelvic inflammation, salpingitis, ovaritis and pevlic peritonitis is carefully considered and worthy of careful reading. The closing chapter on incontinence of urine presents nothing new save that the author describes an operation for the cure of this troublesome affliction as that proposed by Albarran. He advances the meatus urinarius to the clitoris, however, without dissecting the urethra free, and thereby obviates the danger of sloughing of the urethra. Further detailed description of this book is unnecessary since the work of Dudley is too well known for further comment. V.

PROGRESSIVE MEDICINE, Vol. III, September, 1908. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 285 pages, 30 engravings. Philadelphia and New York: Lea & Febiger, Publishers. Per annum, in four cloth-bound volumes, $9.00; in paper binding, $6.00, carriage paid to any address.

The September volume of Progressive Medicine is made up of articles of exceptional scientific interest and merit. Professor Ewart considers diseases of the Thorax and its Viscera. His summary of recent advances in our knowledge of tuberculosis is one of the best which has been presented. He also considers emphysema, the associated disturbances which may arise in disorders of the heart, blood pressure and its relations to disease are topics with which the author has dealt in a manner which will command special attention.

Dr. Gottheil's contribution, covering Dermatology and Syphilis, possesses much of interest even for those whose practice lies outside the lines of these subjects. In particular, we would allude to his views as to the use of carbon dioxide in the treatment of nevi and other growths and to the sections devoted to the uses and limitations of the X-rays in diseases of the skin. The general resumé devoted to syphilis is excellent.

The advance in our knowlede of Obstetrics has been very completely covered by Dr. Davis. Among the topics in his contribution, which possesses more than ordinary interest, may be mentioned changes in the various organs of the body produced by pregnancy, eclampsia, ectopic gestation, face presentation, narcosis during labor, pubiotomy and the management of the third stage of labor.

The department of Nervous Diseases concludes the volume. The author, Dr. William G. Spiller, has produced a very complete and lucid review of the advances in this rather abstruse department of medicine, as is especially apparent in his treatment of the subject of brain tumors and locomotor ataxia.

Progressive Medicine occupies a field apart from that of the magazine. It performs for the general practitioner, the surgeon and the specialist a most important service, bringing him knowledge which he could not otherwise obtain, either by his own efforts or in any other publication.

Most of the advances in medicine are of course first announced in periodicals as the quickest means of publicity. Many of them are lost to the man who does not read a half-dozen languages, and this vital knowledge would moreover be limited to very small circles were it not for the existence of this medium for universal diffusion.

PATHOGENIC MICRO-ORGANISM, INCLUDING BACTERIC AND PROTOZOA. A Practical Manual for Students, Physicians and Health Officers. By William H. Park, M. D., Professor of Bacteriology and Hygiene in the University and Bellevue Hospital Medical College, New York. New (third) edition, thoroughly revised and much enlarged. Octavo, 648 pages, with 176 illustrations and 5 full-page plates. Philadelphia and New York: Lea & Febiger, 1908. (Cloth $3 75, net)

Dr. Park was the first to give concrete recognition in book-form to the fact that diseases caused by animal organisms are almost as important to the human race as those resulting from low form of vegetable life. It is true that the pathogenic bacteria, representing the vegetable kingdom, are more numerous than the disease-bearing protozoa, or animalcules, and it is also true that the latter are more difficult to cultivate and demonstrate, but no reason can justify ignoring them. Professor Park, perceiving this deficiency, supplied it in the most effective manner by preparing chapters on the protozoa and placing them with others on bacteria in a single volume, where they could be studied together, both in similarity and contrast. His work was thus the first to cover all diseases caused by micro-organisms. The need for it and the acceptable way it supplies that need may be seen in the demand for three editions. In a subject of such intense activity, growth is very great, and accordingly the changes in this new edition are extremely thorough-going. Like its predecessors, it is intended to answer the needs of the student and physician to cover the whole subject of pathogenic micro-organisms from both standpoints.

THE MELLIN'S FOOD METHOD OF PERCENTAGE FEEDING. Cloth. Pp. 183. For gratuitous distribution to physicians. Boston: Mellin's Food Co., 1908.

No doubt many of our readers have already read this book with pleasure and profit. The problems of infant diet are always with us, and it is a satisfaction to have in concise form directions for preparing foods for the wide range of conditions which are met. No doctor who has puzzled over a difficult case and has tried to gather from compendious works the necessary information bearing on the case will fail to appreciate the gathering together the meat of the subject in this compact form. Nowhere have we seen the subject so clearly and capably handled and made so readily available. With a goodly price the book would be widely read for it possesses merit and convenience.

THE Louisiana Board of Medical Examiners will enforce the recent law passed by the legislature of the State in reference to disreputable physicians practicing medicine. Every effort will be made to get rid of physicians who are guilty of producing abortions. Evidence is being obtained against those who are guilty of that practice.

ARMY MEDICAL CORPS EXAMINERS.—The Surgeon General oft he Army announces that examinations for the appointment of first lieutenants in the Army Medical Corps will be held January 11, 1909, at points to be hereafter designated. Full information can be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C." One of the requirements is that the applicant shall have had at least one year's hospital training or its equivalent in practice. Applications must be complete and in possession of the Adjutant General on or before Decebmer 10, 1908. There are at present fifty-seven vacancies.

MEDICAL PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

INTERNAL MEDICINE.

O. E. LADEMANN, M. D.

The Diagnosis and Treatment of Bronchiectasis.—Beldau (Münchener Med. Wochenschrift, No. 43, 1908) regards Dittrich's plugs, which are small yellowish-white bits found in the sputum about the size of a mustard seed having their origin in the smaller bronchi, and consisting of detritus, bacteria, crystals of fatty acids and pus corpuscles as highly significant of incipient bronchiectasis. In pronounced cases, however, these plugs, although present, are of less interest as the characteristic and profuse expectoration, and the associated fetid bronchitis are sufficient to indicate the malady. In the far majority of instances a careful inquiry into the history will elicit the fact that the patient with a chronic cough has been expectorating for some time small cheese-like bodies, which on mashing, either between the teeth or fingers have an offensive odor. As a rule these plugs are expectorated one at a time and in intervals of a week or two. It is necessary to call the patient's attention to these bodies as they often escape the notice of close observers. As treatment is only available in the early stages it is of the utmost importance to recognize the condition in its incipiency which the author claims can be done by the appearance of these plugs. Beldau has used the attached formula for the last ten years with uniform sucess, the plugs disappear rapidly and the minutely dilated bronchi are soon restored to the normal. He also uses this formula with good results in cases of advanced bronchiectasis, reducing the amount of expectoration, and rendering the odor of the sputum and patient's breath less putrid.

℞ Balsami gurjuni..... 5.0
Balsami peruvani..... 15.0
Alcohol absolut..... 10.0
Tinct. helianthi annui 20.0
Ol. terebinthinae rectif.....
Myrthol.....aa 7.5

M. S. Sixty drops four times daily one hour after meals in cognac and milk.

Exophthalmic Goiter from the Medical Standpoint.—Stengel (N. Y. Med. Jour., Sept. 26, 1908) gives the following three important types of Graves' disease which the practitioner has to deal with: 1. Cases of moderate enlargement of the thyroid gland, with mild symptoms of hyperthyroidism, occurring in constitutional, circulatory or nervous conditions. These patients usually recover. 2. Typical cases of hyperthyroidism, associated with fixed organic changes in the thyroid gland. These are the cases of classical exophthalmic goiter. The patient may or may not recover under medical or surgical treatment. 3. Cases of long standing goiter or other thyroidal disease, in which symptoms of exophthalmic goiter supervene. Such cases belong to the domain of surgery.

Ascites in Typhoid Fever.—McPhedran (Am. Jour. of the Med. Scs., Nov., 1908) reports six cases of typhoid fever encountered in the last three years presenting signs of an abdominal effusion. In at least four of these six cases the effusion, so far as can be determined, was due to pathological conditions resulting from typhoid infection. The immediate cause of the effusion is uncertain. The disease was severe and attended by much prostration. The abdomen was very relaxed and the contents therefore had little support, so that the vessels would easily dilate, permitting considerable stasis, or at least marked slowing of the current of blood, thus favoring serous exudation. It is possible, also, that the mesenteric glands were greatly enlarged, causing slight but sufficient irritation of the peritoneum to excite effusion. Toxemia is another possible cause of the effusion. In hepatic cirrhosis something more than simple obstruction of the portal vessels is required to cause ascites. This may be a toxic substance which affects the hepatic cells so as further to obstruct the portal circulation, or alters the peritoneal epithelium so as to permit a more rapid escape of serious exudate and possibly also cause obstruction of the peritoneal lymphatic vessels, so that the exudate is less readily removed. It is probable that in other diseases attended by prostration, moderate effusion into the serous cavities may be more frequent than is suspected. Recently in a case of empyema with bronchial fistula, there were signs of pertioneal effusion for some days during a period of marked prostration and moderate teomia; they disappeared with the improvement in the general condition. Even in hepatic disease ascites may disappear rapidly, and that, too, without improvement in the patient's general condition.

The Interpretation of the Venous Pulse.—Bachmann (Am. Jour. of the Med. Scs., Nov. 1908) elaborates on venous pulsations, illustrating his article with a number of pulse tracings. He summarizes his paper as follows: The physiological or so-called nega-

tive systolic venous pulse consists of three positive and three negative waves bearing a more or less definite relation to the events of the cardiac cycle and having their origin in the various movements of the chambers and structures of the right heart. The first positive wave is presystolic in time and is due to the contraction of the auricle causing a slowing of the venous current and producing a centrifugal wave through a sudden arrest of the inflowing blood. The second positive wave is protosystolic in time and originates in the sudden projection of the tricuspid valve in to the cavity of the auricle duing the quick, incipient rise in the intraventricular pressure occurring in the protosystolic period. The third positive wave occurs towards the end of ventricular systole. It consists of two lesser waves separated by a shallow notch. The factors entering into its formation are the relaxation of the papillary muscles at a time when the intraventricular pressure is still higher than the intra-auricular, this resulting in an upward movement of the tricuspid leaflets, and to the return of the auriculoventricular septum to its position of rest. The first negative wave (between first and second positive waves) is due to the relaxing auricle. The second negative wave occurs during the diastole of the auricle. It is due to the dilatation of its walls, to the displacement of the auriculoventricular septum toward the apex occurring at the time of the ventricular systole, and to the pull of papillary muscles on the tricuspid valve leaflets. The third negative wave appears during ventricular diastole and in the common pause of the heart chambers. Its cause is found in the passage of the blood from the auricle into the ventricle. It is somewhat modified, possibly by the continued ascent of the auriculoventricular septum and by a wave of stasis due to the accumulation of blood coming from the periphery.

SURGERY.

Gastroenterostomy for Ulcers of the Stomach.—In a paper read at the October meeting of the Medical Society of Virignia, George Tully Vaughan discusses the comparative advantages of gastroenostomy (including in this term the method of Kocher and the pyloroplastic methods of Heinecke-Mikulicz and Finney) and gastro duodenostomy by von Hacker's method without a loop, and concludes that in suitable cases the former is the method to be preferred, because it preserves more nearly normal conditions—the food still passing through duodenum, there is no danger of a "vicious circle" forming, and peptic ulcer has never been reported as a result. It is not recommended in fresh ulcers of the pylorus or in enormous dilatation of the stomach where the point of drainage might not below enough. He prefers to operate without clamps. Emphasis is placed on the more satisfactory results of surgical, as opposed to medical, treatment. Eleven cases are reported—five gastroduodenostomies or pyloropalsties and six gastrojejunostomies—all were much improved, or were cured of their trouble.

Operative and Non-operative Fibroid Tumors of the Uterus.—Frank De Witt Reese of Cortland, New York (Medical Record, Nov. 7, 1908), pleads for conservatism in operating on uterine fibroids. In general they should be left alone and the patient placed under medical treatment. The cases in which operation is justifiable are those in which there is danger of malignant degeneration, those that are complicated with adenoma, and those in which there are severe pressure symptoms from the other abdominal organs. The author believes that the earliest symptom that gives warning of a possible myoma is dysmenorrhea beginning with the appearance of menstruation at puberty. This is a sign of irritation in the uterus and a fibroma may form later in such cases. Out of fifty cases of fibroids seen by the author, in forty-nine there was a history of dysmenorrhea with the first appearance of the menses. Prophylactic measures instituted after a careful examination at this time may result in the prevention of the fibroid. All dysmenorrheas should be treated at once by examination and rectification of whatever abnormal condition is found, not left to hot applications and coal tar derivatives. The cause of the fibroid is some irritant chemical, mechanical, or histological. The uterus in case of fibroids should be curetted and scrapings examined to see if there is adenomatous degeneration or admixture. Mixed tumors of the utreus should be removed at once.

THERAPEUTICS.

Sulphuric Acid in Carbuncles, Boils, Etc.—J. and R. J. Reynolds, of London, Eng., report the beneficial effects of the administration internally of large doses of the acid. sulphuric. dilut. (B. P.) in staphylococcic infection of the skin and subcutaneous tissu—for example, cases of carbuncles, boils, et e An ordinary dose does not seem to be of an use. To be effective, large doses of 20 to 3 minims, well diluted with water, should b taken regularly every four hours. If a cas

of carbuncle be treated in this way, it will be noticed that after the first twelve or eighteen hours the affected area becomes distinctly circumscribed, and the lesion ceases to extend, softening of the tissues in the affected area rapidly takes place, and pus is discharged, healthy granulations commence to form at the base, and the process of repair goes on uninterruptedly. It is quite unnecessary to cut or to interfere with the part in any way, except perhaps to apply some antiseptic dressing, such as carbolized vaselin (1 in 40) on lint For many years they have treated all such cases by this method, and it has never once failed them. It seems a very simple way of dealing with this affection, and it is claimed that it does not disturb the patient's digestion nor cause any inconvenience in any way. The treatment should be continued for at least a fortnight after the lesion has disappeared. It is obvious that quinine, strychnine, and other tonics can be given in combination with this remedy when occasion demands it, but, whenever possible, the dilute sulphuric acid has been given alone, simply diluted with plenty of water. The cases in which this treatment has proved so efficacious have been uncomplicated by other diseases, such as diabetes, etc.—British. Med. Jour., Aug. 15, 1908.

The Use and Abuse of Salt Solution.—Balloch (American Journal of Obstetrics and Diseases of Women and Children, April, 1908) concludes an article on this subject as follows: Physiologic salt solution is simply a fluid isotonic with the plasma of the blood. Its field of therapeutic usefulness is in conditions which cause alterations in the quantity or quality of the plasma. The quantitative alterations are chiefly those caused by hemorrhage and obstruction of the upper bowel. The qualitative alterations are those caused by the various toxemias. The exact percentage of salt in the solution is important, and extemporaneous solutions are to be condemned, owing to the danger of hemolysis. The subcutaneous tissue offers the most generally useful route for the introduction of the fluid. In emergencies the intravenous route may be chosen, while for postoperative use the rectum best answers the purpose. Its use as an irrigating fluid in abdominal work has no particular effect in preventing adhesions, and it is questionable whether its use to wash away pus, blood, and debris has any advantage over dry sponging.

Treatment of Sweating Feet by Formol.—Viela (Archives de Medecine et de Pharmacie Militaires, March, 1908) expresses his confidence, based on a long experience in military life, in the efficacy of formol as a treatment of sweating feet. Referring to the article of Vaillar, he states that the conclusions were so generally accepted that the treatment has become extremely common in the army. Viela advises that each year on the approach of warm weather all the soldiers affected with sweating feet shall be subjected to the following treatment: On the first day in the morning, at noon, and in the evening the ordinary commercial solution of formol, one-third strength, is painted over the soles of the feet. On the second day three applications are again made, but with a solution of half strength. On the third day three more applications are made with a solution of full strength. On the third day three more applications are made with a solution of full strength. Thereafter every eight days a solution of full strength is applied. In many subjects cure is maintained by an application repeated not more frequently than once in fifteen or twenty days. When the epidermis is greatly macerated the beginning treatment may be begun with 1:10, 1:20, or even 1:30, according to the degree of sensibility. If the application causes very violent burning, washing with water and a weaker strength of solution are employed. Sweating hands are cured by a similar treatment, which has the effect of slightly blunting tactile sensibility.—Therapeutic Gaz.

Pottenger states that the frequency of tuberculosis of the lymphatic glands is not generally realized; that a large majority of children have tuberculosis of the lymph glands, and it is further probable that these glandular foci are often the source whence come the bacilli which cause infection in other organs in later years.

Dr. S. Weir Mitchell tells with keen enjoyment of the experience of a medical friend of his who engaged a nurse, recently graduated, for a case of delirium tremens. "Lippincott's Magazine" repeats the story: The physician succeeded in quieting the patient and left some medicine, instructing the nurse to administer it to him if he "began to see snakes again." At the next call the physician found the patient again raving. To his puzzled inquiry the nurse replied that the man had been going on that way for several hours, and that she had not given him any medicine. "But didn't I tell you to give it to him again if he began to see snakes again?" demanded the physician. "But he didn't see snakes this time," replied the nurse, confidently. "He saw red, white and blue turkeys with straw hats on."

BYRON ROBINSON'S NOTE-BOOK.

Persistent, intelligent, wise industry builds the road of progress. Wasteful industry, as on ancient useless, monstrous pyramids is the badge of progress, the badge of authority that has enslaved many bodies and many minds. Progress is the distinctive mark of man alone.

Supervision and constant improvement of the public schools is a permanent and chief duty of the people.

The public schools are the mills of government gods, which grind exceeding slow but exceeding fine.

The hope of progress lies in the education imparted by the public schools.

The chief aim of the public schools is the formation of character on which progress depends.

The spirit of progress is now afoot, the birth of momentous event is at hand, the triumph of peace has arrived, with hopeful promise of the future.

The innate force of progress has pervaded all civilized nations from prehistoric times.

Progress is the triumph of peace.

The rational treatment in any given case of uterine deviation is to treat the complications which are in reality responsible for the symptoms, leaving the liberated uterus in its original state of anatomical and physiological mobility.—Dr. Lucy Waite.

Contagious diseases will be swept from the earth.

Segregation in colleges is directly opposed to education.

Coeducation improves the ethics of both sexes, and induces the maximum decorum.

Coeducation produces the highest form of conduct in classes.

Coeducation lessens the unscientific mystery of sex and increases respect for each other.

Coeducation inculcates respect, a healthy fear of man for woman.

EXTERMINATE THE FLY.—According to the Water Pollution Committee of the New York Merchants' Association, 7650 deaths from typhoid and other intestinal diseases can be traced each year to the flies of New York City. In Chicago, also, experiments have been made. In a district where typhoid fever was prevalent eighteen flies were caught and the typhoid germ was isolated from five of the eighteen.

SOCIETY PROCEEDINGS

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.*

Abstracts of papers read at the Thirty-fourth Annual Meeting, held at Louisville, Ky., October 13-15, 1908.

SURGICAL SECTION.

Hernia of the Pelvic Floor.—Dr. Channing W. Barrett, Chicago: From study of embryology, we learn that the tail muscles of the quadruped develop into the levator ani muscle of man. Hernia may develop at any place in the abdominal wall due to weak defective walls and increased abdominal pressure, but the pelvic floor, because it is the lowest part of the abdominal wall, and has natural openings, which at times are much dilated, furnishes a frequent site for the development of hernia. Following the overstretching or laceration of the levator ani muscle, the pelvic floor sags and the abdomino-pelvic contents begin to herniate through the defect, the first bladder or rectum, or both, then the uterus and other organs. The terms "laceration of the perineum" and prolapse of the uterus" are not comprehensive and have led to erroneous treatment. Removal of a prolapsed uterus alone removes only a portion of the contents of the hernia, and still allows a hernial sac to be formed of the vagina with the rectum, bladder and intestines as contents. The condition is not cured by plastic operation on the vaginal mucous membrane or valvular skin. While defects in the muscles are repaired, it must be remembered that predisposition of the hernia to return is furnished by the vaginal and rectal outlets. The uterus must have its axis put at an angle with that of the vagina. In so-called "prolapse of the rectum," the support furnished by the levator ani is defective. The cure of prolapse of the rectum should deal with this muscle instead of being attempted by futile plastic operations on the rectum. Work on the levator ani should be accomplished in lacerations of the perineum without causing superficial structures to close the vagina. This can be done by making the line of incision at the junction of the vagina and vestibule instead of on the labia majora, as is frequently done, thus leaving the normal entrance into the vagina. Superficial perineorrhaphies, not dealing with the levator muscle, are worse than useless.

Vaccine Therapy in Surgical Infections.—Dr. John C. Hollister, Chicago: The article is a brief summary of clinical conclusions

* Jour. A. M. A

of a series of cases of infection with staphylococcus, tubercle bacillus and gonococcus treated by vaccine therapy and based for the most part on the opsonic index. Only those cases are considered in which vaccine had been given long enough to draw clinical conclusions, and care has been taken to avoid overstatement of facts. Thirty-four staphylococcus infections were persistently treated; 25 by autogenous and 9 by stock vaccines; cases consisted of 12 of acne, 15 of boils or large furuncles, 2 of empyema, 1 mixed infection with case of lupus, and 22 fistulas mixed. The results: Thirty-eight per cent cured; 38 per cent improved; 20 per cent not improved. Of the 25 patients treated by autogenous vaccines, 32 per cent were cured; 36 per cent improved; 3 per cent did not improve. Of the 9 receiving stock vaccine, 7 were cured and 2 were slightly improved. Forty-one patients with tuberculosis were treated. There were patients with bone and joint diseases, 4 of which had also pulmonary involvement—29 in all; or patients with urinary tract infection; 3 with pulmonary tuberculosis; 4 with tuberculous glands of neck; 1 with generalized (lung, genital tract, skin, conjunctiva) infection, and 1 case of peritonitis; Results: Seventy per cent improved—15 greatly, 13 slightly; 5 per cent unimproved. Of the 13 patients unimproved, 10 had generalized infection.

I believe that the opsonic index is by no means an unfailing guide for determining the amount of vaccine and the time of administration, for the following resaons: 1. Many cases showing persistent high index show no clinical improvement. 2. Fewer number of patients improve, although the index remains comparatively low. 3. Many continue to improve greatly when treated without regard to the index. These reasons apply especially to staphylococcus infection in which we have found as a rule before treatment normal index, and that the opsonic index, when obtained with careful technic, is a distinct aid in diagnosis, especially in the chronic localized infections. A presistently low or varying index is a strong indication that the patient is suffering from specific infection.

Process for Making New Noses.—Dr. H. R. Allen, Indianapolis: First, make a plaster of-Paris mask or reproduction of the noseless space. Second, model half a dozen or more different noses that are appropriate to the other features of the face. Third, if desirable, model other features of the face that need improvement. Fourth, construct a hollow metallic bridge or supporting frame which will reproduce the shape of nose selected when placed beneath the skin. Fifth, operation: Pull the upper lid forward, and about one centimeter below the gingiolabial fold, and make an incision about one-third the thickness of the lip and run parallel with the gum margins of the upper teeth. Let this incision terminate about the first molar tooth. Complete the incision vertically and dissect the soft tissues of the nose and face free from the skull. Care should be taken not to injure the nerves from the infaorbital foramen nor tear the ducts. Sixth, place the nostril hook into the nostrils and pass the points around so that they come out underneath the upper lip. Seventh, make traction upward and outward on the hook and the entire field for supporting the nose frame comes into plain view. Eighth, stretch the nasal tissues forward and prepare the foundation for the bridge or metallic support for the nose. Ninth, place the new hollow metallic bridge under the lip, where it is to rest permanently. Tenth, suture the original wound. If there are no soft tissues and consequently nothing under which to place a metallic bridge, the constructive principles differ, inasmuch as it is necessary to dissect out the skin on each side of the nasal orifice and draw the skin together and suture it in the median line. Perinostril openings must be made. Later when a firm union is established, the regular gingiolabial incision is made and the nose construction operation proceeds as described. A normal looking and functioning nose is permanently established. The procedure is simple and there are no disagreeable sequelae that I am aware of. The voice at first is modified, but soon becomes normal. There is some advantage in the saving of time and tissues. It takes months to make a flap nose and still longer to graft on a finger or other tissues; and the flap and graft noses are not artistic. This method permits the patient to select his own features, because he can have a nose of any shape or size.

[To be continued.]

RENEW YOUR SUBSCRIPTION.—According to a recent ruling of the Post-office Department, no one is to be considered a subscriber to this magazine unless he shall sign a subscription blank, authorizing the publishers to continue same to his address. As we do not wish to send the Fortnightly to anyone not desiring same, we must again request that all subscribers wishing the journal, shonld fill out the blank found in this issue and return by early mail. The names of all who do not comply with this ruling by December 31, must be dropped from our list.

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A Cosmopolitan Biweekly for the General Practitioner

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CLINICAL THERAPEUTICS

A forum of original experience, to which scientific contributions are invited. Responsibility for views promulgated imited to author.

Sal Hepatica.—The satisfying efficacy of various of the laxative mineral waters as compared with the taking of "salts" has lead many manufacturers to study various combinations of salts in an effort to improve on the waters themselves; this has led to numerous effective products, one of the very best of which is the sal hepatica of Bristol-Myers Company. The range of usefulness of sal hepatica is as wide as that in which constipation features as a cause or as an attendant symptom. It is unlike other products of similar nature, in that it is pleasing rather than objectionable to the palate, and it causes no griping or malaise.

Remarks Upon the Treatment of Nervous Insomnia.—(By Dr. Klinkenberg (Aachen,) Deutcshe Medizinal-Zetung, 1908, No. 56.)—In several cases of insomnia, absolute mental and often bodily rest are necessary. In most cases, the underlying disease will be favorably affected. The patient should drop his work and go away. In moderate cases, it is often sufficient to restrict the amount of mental work, particuarly during the evening hours. A walk before retiring, moderate hydriatic procedures, a luke-warm full or sitz-bath, a cold foot-bath, cool applications to the abdomen are often beneficial. Much is gained, if the fear of not being able to sleep is removed; here suggestion, with or without electricity may be serviceable. The bedroom should be cool, dark and quiet and the patient must not be covered too warmly. Great care should be directed to the diet; it must be abundant so that the general condition improves and the evening meal should be given and consist only of easily digested food. If all these measures cannot be carried out, or have been tried without success, it is proper to resort to the sleep-inducing drugs since we known that a number of sleepless nights are not good for the heart and nerves. The most important of these drugs are veronal and bromural. Unfortunately, veronal is not entirely free from disagreeable after-effects. These have been reported fully in literature. These after-effects are particularly felt by nervous individuals, partly because they react more strongly to abnormal sensations. The author made comparative experiments with bromural and veronal. Owing to complete absence of narcotic properties, bromural will be ineffective in severe organic disease and in pronounced neurasthenic conditions. On the other hand, it is excellent where the insomnia depends merely upon an inability to fall asleep. The drug is indicated particularly in children and young individuals and a beneficial influence upon chorea and epileptic attacks has been repeatedly observed. The nocturnal attacks of whooping-cough were also diminished in frequency. In nervous patients, it was often seen that they quiet down, but cannot sleep after a morphine injection given for pain. By also giving 0.6 grams bromural, sleep usually set in. Owing to the cumulative action of veronal, cases that at first did not respond to bromural, will nowr eact sufficiently. All mild cases of insomnia should first be treated with bromural. Veronal should be administered only if 0.6 grams of bromural do not cause sleep, but bromural should still be given alternately, every third night.

The day will undoubtedly come when diphtheria, cholera, typhoid scarlet fever and tuberculosis will not be the cause of death.